

8506-4-22
PFE ORIGINAL
(Red)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III

841 Chestnut Building
Philadelphia, Pennsylvania 19107



SEMS DocID 2332280

SUBJECT: Request Assistance from FIT Office

DATE: 6/30/86

FROM: Lorie Acker, SIO
Site Investigation & Support Section (3HW23)

TO: Butch Byer, FIT Regional Project Officer
Site Investigation and Support Section (3HW23)

I. SITE NAME: Pigeon Point Landfill (DE-27)
DSN

II. LOCATION: New Castle, DE

III. WORK ASSIGNMENT:

<input type="checkbox"/> Preliminary Assessment	<input type="checkbox"/> Quality Assurance Review of Data
<input type="checkbox"/> Site Inspection	<input type="checkbox"/> Re-Sampling/Full Field Investigat
<input type="checkbox"/> Hazard Ranking System	<input checked="" type="checkbox"/> Peer Review Corrections/Finalize
<input type="checkbox"/> Toxicology Assessment	<input type="checkbox"/> Other (See VI below)
<input type="checkbox"/> Enforcement Support	

IV. PRIORITY:

☒ High (*) ☐ Medium ☐ Low

V. Preferred Deadline:

Date: July 14, 1986

VI. EXPLANATION OF TASK (* To include justification for high priority):

Attached are MITRE'S comments for this HRS. Please make the necessary changes + call me if you have any questions.

VII. To be completed by FIT RPO only:

Task complete date by FIT: 7/24/86

Hours allocated: 0

JB for
Butch
6/30/86

MITRE

8506-14-23

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19 June 1986
W52-1392

Mr. Connie Carr
U.S. Environmental Protection Agency
841 Chestnut Building, 6th Floor
9th and Chestnut Street
Philadelphia, PA 19107

Dear Mr. Carr:

A QA review has been completed on the Pigeon Point Landfill HRS package. This review has led to the following comments.

Ground Water Route

Observed Release

Documentation of the observed release can be strengthened in several ways. First, the various references consisting of analytical data (19, 16) and sampling locations (10) should be listed as documentation for contaminants detected. Next, the rationale for attributing the contaminants to the facility can be improved. The inclusion of well 49 to describe an observed release of ethyl benzene is not recommended. Ethyl benzene was detected at 2 ug/l in this well, whereas the substance detection limit is 1 ug/l. The observed release of ethyl benzene is best described using only wells 46 and 47 where the values were 5 and 50 ug/l, respectively. In addition, the values provided for arsenic in Reference 19 are potentially confusing. Specifically, the March 1985 samplings from wells 28 and 29 are listed twice in the summary table. However, each listing is different. Since the units in the table are given as ug/l, the correct values appear to be 218 for well 28, 259 for well 29, and less than 25 for wells 25R, 26R and 27R. Lastly, documentation of an observed release should include locations of the wells sampled and well depths. However, neither Reference 7 or 19 provide this information. The addition of Reference 4 at this point in the documentation record will supply this information.

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Aquifer of Concern

The Columbia and Potomac Formations have been combined into the aquifer of concern. The strongest argument for this combination is that contaminants have been documented in the underlying Potomac aquifer. Arsenic was found in significantly higher levels in wells 28 and 29 than in well 26R; all three of these wells are screened in the Potomac. Because contaminants attributable to this facility have penetrated the Columbia and are found in the Potomac, the HRS aquifer of concern boundary can be expanded accordingly. Therefore, an explanation of this contaminant migration should be added to the description of the aquifer of concern. Also, Reference 17 is a repeat of page 128 in Reference 5 and perhaps should be deleted as Reference 17.

Ground Water Use

Contradictory information is presented for this factor in References 6 and 7. While Reference 6 states that the Artesian Water Company has four supply wells within three miles of this site, Reference 7 shows nine wells within three miles. Based on the information in Reference 3, it appears that Reference 7 is more accurate. However, since none of the maps show the entire three-mile radius around this site, it is not possible to determine the exact number. This discrepancy between References 6 and 7 should be resolved.

Population Served

The references for this factor do not specifically state that the entire three-mile radius is served by the Artesian Water Company. Since ICI Americas relies upon their own well for drinking water, it appears that portions of the three-mile radius do not have access to municipal lines. Should this be the case, an estimate of the area relying on private wells should be provided. A more precise description of the distribution network of the Artesian Water Company should be provided in any instance.

Surface Water Route

In order to evaluate this pathway, hazardous substances must be identified that are available for overland migration. It is not clear that this identification has been done for this site.

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Reference 10 provides the sampling locations and Reference 16 gives analytical results for the collected samples. These references indicate that hazardous materials are present at SL No. 7 (southside leachate collection) and SL No. 8 (perimeter leachate collection). However, it is not apparent that the leachate sampled at these locations is available to the surface water pathway. Currently, a leachate collection system intercepts contaminants migrating through the subsurface towards ground water. The intercepted contaminants are collected for treatment and are unavailable to the surface water pathway. Prior to installation of this collection system, presumably the leachate continued migration through the subsurface and likewise was unavailable to the surface water pathway. Thus, hazardous materials at the surface of this landfill with non-zero containment for surface water must be identified in order to evaluate this pathway. Although it appears from Reference 19 that other areas containing hazardous substances have been identified (fire pond, east collection manhole, west collection manhole, and southwest lift station), these areas have not been located or evaluated for availability to the surface water pathway. The surface water route cannot be evaluated until an ^{an}overload migration pathway has been identified and defined. Otherwise, this route score will be zero.

Although this route cannot be fully evaluated with the present documentation, comments on the other aspects of the surface water route are offered at this time.

First, facility slope is measured along the migration pathway from any point where hazardous substances are available for migration to the edge of the facility. In the documentation provided, the elevations at wells 24 and 29 were used for this calculation. However, midway between these two wells is a stream which would intercept contaminant flow. Therefore, the slope between these wells is not along the migration pathway. Second, a critical habitat of the peregrine falcon was identified as a nest located underneath the Delaware Memorial Bridge, along the surface water migration pathway. The nest itself is not a critical habitat. The critical habitat is an area which contains resources important to the particular species. The idea is to protect the habitat rather than individual members of the species. An endangered species field office of the U.S. Fish and Wildlife Service would be able to identify any such areas near the site. Third, documentation of surface water intakes under population served should refer to Reference 13 instead of Reference 12.

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Direct Contact

Evaluation of this exposure mode depends on an observed incident, or accessibility and containment. Since there have been no observed incidents at this site, accessibility and containment were evaluated. Once it is established that either accessibility or containment receives a value of 0, the exposure mode score is a 0. Thus, there is no need to document the factors following containment for this site. If the remaining factors are documented, then they must be documented fully. Specifically, a map showing the one-mile radius around this site must be provided to verify the target population.

As a final note, it is suggested that the reference number be placed at the top of the first page of each reference. In this manner, references can be quickly identified should they become separated from their blue marker pages. If you have any questions about these comments, please contact me at (703) 883-7866.

Sincerely,



David E. Egan
Technical Staff
Hazardous Waste and Safety Systems

DEE:slg

cc: Scott Parrish
Jane Metcalfe